CONTENTS

	Page
Acknowledgements	xi
List of Participants	xiii
F. M. HUENNEKENS, A Leader in Current Issues in Chemotherapy	xv

SESSION I

ANTIFOLATES

Session Chairman: E. REICH

KNIGHT, C. B., ELWOOD, P. C. and CHABNER, B. A., Future Directions for Antifolate Drug Development	3
FREISHEIM, J. H., PRICE, E. M. and RATNAM, M., Folate Coenzyme and Antifolate Transport Proteins in Normal and Neoplastic Cells	13
JACKSON, R. C., The Problem of the Quiescent Cancer Cell	27
MATTHEWS, D. A., APPELT, K. and OATLEY, S. J., Crystal Structure of *Escherichia coli* Thymidylate Synthase with FdUMP and 10-Propargyl-5,8-Dideazafolate	47
HENDERSON, G. B., Mediation of Cellular Anion Detoxification in Leukemic Cells by Unidirectional Efflux Pumps	61

SESSION II

ENZYME PATTERN-TARGETED CHEMOTHERAPY

Session Chairman: M. J. OSBORN

WEBER, G., Critical Issues in Chemotherapy with Tiazofurin	75

ROBINS, R. K., OJO-AMAIZE, E., PARANDOOSH, Z., COTTAM, H. B., MATSUMOTO, S. S., REVANKAR, G. R., SMEE, D. F., FUJITAKI, J. M., WILLIS, R. C., RUBALCAVA, B., NORD, L. D. and JOLLEY, W. B., Nucleoside and Nucleotide Modulation of Genetic Expression — A New Approach to Chemotherapy 97

CARTER, G. L. and CORY, J. G., Selective Resistance of L1210 Cell Lines to Inhibitors Directed at the Subunits of Ribonucleotide Reductase 123

STUHMILLER, L. M., NAZARBAGHI, R., WEBBER, S. and WHITELEY, J. M., Methotrexate 5-Aminoallyl-2′-Deoxyuridine 5′-Monophosphate: A Potential Bifunctional Inhibitor of Thymidylate Synthase 141

SESSION III

THYMIDYLATE SYNTHASE-TARGETED CHEMOTHERAPY

Session Chairman: K. YAGI

HARRAP, K. R., JACKMAN, A. L., NEWELL, D. R., TAYLOR, G. A., HUGHES, L. R. and CALVERT, A. H., Thymidylate Synthase: A Target for Anticancer Drug Design 161

MALEY, G. F. and MALEY, F., An Anomaly in the Active Site Region of Thymidylate Synthase 181

ZAPF, J. W. and DUNLAP, R. B., A Rapid, Reliable, and Convenient Method for the Purification of Thymidylate Synthase from Amethopterin-Resistant *Lactobacillus casei* 189

GALIVAN, J., NIMEC, Z. and ROTUNDO, R., The Characteristics and Consequences of Folate Depletion in Hepatoma Cells *in vitro* by Inhibition of Dihydrofolate Reductase 209

YAGI, K., Adriamycin Entrapped in Sulfatide-Containing Liposomes 219

SESSION IV

CLINICAL APPLICATIONS

Session Chairman: G. H. HITCHINGS

NIETHAMMER, D., DIDDENS, H., GEKELER, V., FRESE, G., HANDGRETINGER, R., HENZE, G., SCHMIDT, H. and PROBST, H., Resistance to Methotrexate and Multidrug Resistance in Childhood Malignancies 231

KERWAR, S. S. and ORONSKY, A. L., Methotrexate in Rheumatoid Arthritis: Studies with Animal Models 247

SILBER, R., POTMESIL, M. and BANK, B. B., Studies on Drug Resistance in Chronic Lymphocytic Leukemia 267

BERTINO, J. R., LIN, J., PIZZORNO, G., LI, W. W. and CHANG, Y. M., The Basis for Intrinsic Drug Resistance or Sensitivity to Methotrexate 277

Author Index 287

Subject Index 303

Contents of Some Previous Volumes 317